# CCC '01 J2 - Mod Inverse

**Time limit:** 2.0s    **Memory limit:** 256M

**Canadian Computing Competition: 2001 Stage 1, Junior #2**

In many cryptographic applications, the Modular Inverse is a key point. This question involves finding the modular inverse of a number.

Given $0 < x < m$, where $x$ and $m$ are integers, the modular inverse of $x$ is the unique integer $n$, $0 < n < m$, such that the remainder upon dividing $x \times n$ by $m$ is 1.

For example, $4 \times 13 = 52 = 17 \times 3 + 1$, so the remainder when $52$ is divided by $17$ is 1, and thus $13$ is the inverse of $4$ modulo $17$.

You are to write a program which accepts as input the two integers $x$ and $m$, and outputs either the modular inverse $n$, or the statement `No such integer exists.` if there is no such integer $n$.

## Constraints

$m \leq 100$

## Sample Input 1

```
4
17
```

## Sample Output 1

```
13
```

## Sample Input 2

```
6
10
```

## Sample Output 2

No such integer exists.